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USE OF THESE GUIDELINES

These guidelines have recently been revised by the sealant workgroup of the Washington State Department of Health to assist local communities in the planning, implementation and evaluation of community based sealant programs. They have been adapted from the National model SEAL AMERICA . They contain Washington state specific WAC s and policies. This edition includes a newly developed quality assurance chart. This can be used by programs to assure that they have included necessary activities to operate a highly effective program.

This manual provides a step by step formula to developing quality programs. It leads the reader through the necessary components from assessing the community, to establishing an infrastructure to support the program, through the logistics of preparing to provide sealants at a community site, to the actual provision of sealants.

EACH STEP BUILDS ON THE PREVIOUS ONE.
EACH STEP HAS VALUABLE RESOURCES MENTIONED. WHEN THIS OCCURS, THE RESOURCE CAN BE FOUND IMMEDIATELY FOLLOWING THE STEP IN THE ORDER IT WAS DISCUSSED. LOOK FOR FOLLOWS THIS STEP IN THE TEXT.
A QUALITY ASSURANCE TOOL IS PART OF THESE GUIDELINES

A quality assurance tool is provided . As you proceed in the development of the program, use this tool as a checklist to make certain you have accomplished the necessary tasks. Experience has shown that cost effective, successful programs are well planned, include the necessary stakeholders, keep both eyes on quality and are always seeking to improve.

By the end of the planning process, each program should have developed a manual which includes agency specific policies, procedures, protocols and forms designed to meet individual program needs.

This manual is intended to provide concrete, useful information. Sealant programs have been operating in Washington State since 1986. Look for currently operating programs in Step 3. Experienced program managers are good resources for practical advise and are willing to help new programs in development.

Guidelines for
Community Based Sealant Programs

SECTION	STEP REFERENCED	COMPLETED		COMMENTS
		YES	NO	
I. STRUCTURE				
A. Population/Community				
1. A written work plan available that defines community to be served.	**1**			
2. Populations are appropriately targeted.	**1**			
B. Infrastructure/Capacity				
1. Systems are in place to assure sustainability and community support.	**2**			
2. A community based advisory group is established.	**2**			
3. Funding is secured.	**2**			
C. Staff				
1. There is a program supervisor and an on-site coordinator.	**3**			
2. Staff wears appropriate identification on-site.	**3**			
3. Team consists of a provider with an assistant.	**3**			
4. Copy of professional license are on file	**3**			
5. Written personnel policies governing term of employment, working conditions, duties, benefits, and opportunities for training or advancement.	**3**			
6. Personnel guidelines, OSHA, WSHA, WACs followed	**3**			
7. Policy and procedure manuals developed and govern program operations	**3**			
8. Contracts with dental providers are available for review by State DOH.	**3**			
9. Staff is train and training is documented				
D. Equipment/Supplies/Facilities				
1. One fully functioning dental unit is available.	**4**			
2. Equipment is properly maintained and is in good repair.	**4**			
3. Sterilization space is isolated from clean area.	**4**			
4. Appropriate supplies are available and sterile condition maintained.	**4**			
5. Backup equipment and replacement parts are available.	**4**			
6. Facilities are appropriate for procedures.	**8**			
E. Sterilization, Disinfection and Exposure Control				
1. Written policies and procedures for OSHA/WISHA infection and exposure control are available on site.	**4**			

SECTION	STEP REFERENCED	COMPLETED		COMMENTS
		YES	NO	
F. Medical Emergency and Hazard Preparedness				
1. All staff have current certification in CPR with documentation on file	**3**			
2. Emergency kits are available.	**7**			
3. Emergency routine at portable operatory is established.	**7**			
4. Written policies and procedures for hazards such as fire, chemical and noise are available.	**7**			
G. Forms/Data/Documentation				
1. Patient records are immediately available for use. When not in use records are kept in a secure area.	**5**			
2. Patient records include patient demographics.	**5**			
3. Other pertinent forms are attached to the patient record.	**5**			
4. Consent forms are complete, have parent/guardian signatures and are available in all appropriate languages.	**5**			
5. A medical history is obtained on all patients.	**5**			
6. Sealant records are complete and signed/dated by the examiner and provider. Other necessary comments are completed.	**5**			
7. Referral forms are available and used appropriately	**5**			
8. Using interviews, surveys, group discussions or other methods, information about the sealant program is obtained from schools, communities, parents, students, staff or other participants in the sealant program.	**5**			
9. Data is available on program costs and patient billing.	**5**			
10. Data is collected according to the State DOH contract "Sealant Data Summary" form.	**5**			

SECTION	STEP REFERENCED	MET		COMMENTS
		YES	NO	
II. PROCESS				
A. Defining Population/Community				
1. "Community Risk Index" is determined by the following parameters:				
a) Access to dental care	**1**			
b) Caries experience rate	**1**			
c) Level of community support and commitment	**1**			
2. School selection is determined by the following parameters:				
a) Free/Reduced Lunch percentage is greater than 30%	**1**			
b) High rate of homeless, ESL or DD students c) Ability of students to access dental care	**1**			
3. Child selections is determined by the following parameters:				
a) Second Grade priority (6-8 year olds)	**1**			
b) Positive consent obtained from parent or caregiver	**1**			
c) Screened by licensed dentist	**1**			
4. Tooth selection is determined by the following parameters:				
a) First permanent molars	**1**			
b) Pit and Fissure evaluation	**1**			
c) Levels of caries activity	**1**			
B. Infrastructure/Capacity				
1. Evidence of advisory group activity.	**2**			
2. Services are billed appropriately.	**2**			
3. Billing records are available.	**2**			
4. Medicaid is billed fee for services or for Administrative Match.				
C. Staff Training				
1. Staff is trained in equipment operation and maintenance and safety.	**3**			
2. Staff is trained in sealant placement & evaluation	**3**			
3. Staff trained is provided in policies, procedures, protocols.	**3**			
4. Staff is trained in the use of all program forms.	**3**			
5. Staff training is documented.	**3**			
6. Contractors comply with training requirements as quality assurance mechanism.	**3**			

SECTION	STEP REFERENCED	MET		COMMENTS
		YES	NO	
D. Sterilization, disinfection and exposure control				
1. Instruments are appropriately sterilized	**4**			
2. All sterilizing areas are properly vented.	**4**			
3. Technique and effectiveness of sterilization are tested according to WISHA	**4**			
4. Sterilized instruments are stored in the sterilizing bags.	**4**			
5. Disposable instruments and supplies are used whenever possible.	**4**			
6. All surfaces are wiped with a suitable disinfectant.	**4**			
7. Disposable covers are used for handles, switches, headrests and trays.	**4**			
8. Contaminated disposed materials are sterilized when possible and discarded in special sealed plastic bags.	**4**			
9. Disposable items are brought back to the Health Department or appropriate facility for disposal and are not placed in the community general trash.	**4**			
10. Hands are washed thoroughly before and after treatment or approved hand-cleaning agents are used when water is not available.	**4**			
11. Gloves, masks and eye protection are worn. Gloves are disposed of after each patient.	**4**			
12. High velocity evacuation is used.	**4**			
13. Infection and exposure control policies along with MSD data sheets are available on site.	**4**			
E. Medical emergency and hazard preparedness				
1. Accident and injury report forms along with appropriate phone numbers are in available.	**7**			
2. Staff is familiar with emergency routine and where emergency supplies are kept.	**7**			
3. Fire	**7**			
a) Fire extinguishers, inspected yearly for operability, are conspicuously located and accessible b) All hazardous chemicals are appropriately labeled and stored	**7**			
c) Smoke and fire alarm systems are operational.	**7**			
d) A fire escape plan is posted in a prominent area.	**7**			
e) Portable fire extinguishers are in all vehicles.	**7**			
4. Chemicals	**7**			
a) All hazardous chemicals are appropriately labeled and stored	**7**			

SECTION	STEP REFERENCED	MET		COMMENTS
		YES	NO	
b) Staff are trained in knowledge of chemical hazards, avoidance of problems and emergency procedures in the event of injurious exposure. All hazardous chemicals are appropriately labeled and stored	**7**			
5. Noise	**7**			
a) Appropriate precautions are taken to reduce noise levels	**7**			
6. Earthquake.	**7**			
a) Earthquake preparedness kits are in all vehicles.	**7**			
F. Forms/Data/Documentation				
1. Internal documentation reviewed yearly and recorded.	**9**			
a) Performance and documentation of medical/dental history	**9**			
i) A preliminary information base is developed for all patients, is up to date and covers areas listed in Step 6.	**5**			
ii) A medical history is obtained on all patients. This medical history is up to date and includes the following areas:	**5**			
a) All questions are answered.	**5**			
b) Possible compromising conditions are followed up and documented.	**5**			
c) Charts of patients with compromising conditions are flagged with a medical alert sign.	**5**			
d) Histories are dated and signed by a responsible adult.	**5**			
e) All histories are reviewed and signed by the provider.	**5**			
b) Performance and documentation of the patient examination	**5**			
i) Oral health assessments are conducted using the Smile Survey format.	**5**			
ii) All findings are recorded and dated.	**5**			
c) Diagnosis				
i) Diagnosis for sealant placement conforms to Washington State Sealant Guidelines.	**1**			
ii) Oral health status and treatment needs of each student screened are reported to parent or caregiver.	**7**			
iii) Diagnosis is documented in a clearly identified portion on the patient record.	**7**			

SECTION	STEP REFERENCED	MET		COMMENTS
		YES	NO	
d) Treatment planning	7			
i) A treatment plan based on the diagnosis is clearly written on the patient record.	7			
ii) Any field service beyond oral health assessments has informed consent.	7			
2. State sealant summary data submitted as required by contract.	5			
G. Sealant Placement	8			
1. Sealant placement is done using a four-handed approach.	8			
2. Curing lights function at adequate levels and are checked by radiometer at regular intervals.	8			
3. Sealant retention rates are 90% or higher.	8			
4. Sealant material used is tracked	8			

SECTION	STEP REFERENCED	MET		COMMENTS
		YES	NO	
III. Program Evaluation				
A. Process Measures				
1. Oral health assessments indicate that schools targeted for sealant programs have high-risk populations.	9			
2. The number of 6 - 8 year olds receiving sealants matches or exceeds the estimated measure reported on the Sealant Data Summary form.	9			
3. Sealant retention rate is 90% or higher.	9			
4. Documentation evaluation complies with expected rates.	9			
5. Other indicators as dictated by specific program needs are documented and reviewed yearly.	9			
B. Access and Satisfaction				
1. Qualitative data is collected and analyzed to measure school/community satisfaction with services.	9			
2. Data regarding untreated disease and treatment referrals are shared with the community.	9			
C. Utilization				
1. Data reported according to State DOH "Sealant Data Summary" form.	9			
2. Other indicators as dictated by specific program needs are documented and reviewed yearly.	9			

STEP I

ASSESS AND TARGET POPULATION

Changes in caries patterns call for specific targeting strategies in community-based sealant programs so that the children with the greatest need receive sealants. Predicting caries risk both for individuals and populations continues to be under investigation. While dental caries has declined in the overall population, thousands of children in Washington State continue to experience this preventable disease. This decline in caries is not equally distributed and a small segment of children account for the majority of the disease. In public health programs limited resources must be used effectively. Targeting those children most vulnerable to experience decay is the first and most important step in planning a community based sealant program.

The first action is to define the geographic or administrative area to be served, then select a community site. Next identify which grade or grades will receive the service, select the appropriate children. Lastly, identify the specific teeth to be sealed.

When selecting a geographic area, the program must determine the appropriate method to target the population to whom this service is offered. Assessing the oral health status of an area s population will determine those at highest risk of experiencing dental decay on permanent molars. A valuable reference for assessing the oral health of a community entitled MCH Oral Health Needs Assessment is available for programs in Washington State. How to request this reference follows this step.

SELECT POPULATION

Factors that have been found to have a correlation with high dental disease rates are:

Income

Income criteria are often considered because children from low-income families tend to have higher disease experience and receive less dental treatment

Income criteria are often considered because children from low-income families tend to have higher disease experience and receive less dental treatment. Use the Free and Reduced Meals Program as a proxy for income when targeting schools. This data is available from the Office of Superintendent of Public Instruction yearly. Most programs in the state select schools according to some indicator of economic need and then make the program available to ALL students in targeted grades.

- Geographic Location
- Geographic location can affect the number and proximity of dental professionals available to treat the targeted population.
-
- SELECT INDIVIDUALS
- Once the site has been selected, individuals who will participate in the sealant program must be selected. Factors found to be important in selecting the appropriate individuals include :
-
-
- Grade Level
- The permanent teeth most likely to experience occlusal caries are first and second molars. Most sealant programs, therefore, target these teeth. Studies show that second grade seems to be the most appropriate grade level to seal the most erupted, noncarious first molars. It is commonly recommended to select sixth graders for sealing second molars.
-
- Resources
- Programs will vary in their ability to offer sealants depending upon the resources available. The location of the grades within the school district, the caries experience on the second molars in older grades, the tendency of the children in older grades not to participate, students school schedules can all influence the ability of the program to serve the maximum number of students. Some programs may be able to offer sealants to all students in both second and sixth grade while others may be able to offer sealants to students from only one grade level.
-
- Access To Care
- The ability of children to receive care at a private dental office or a non profit community based dental clinic can influence the selection of students. Some programs limit sealants to those children who do not have a dentist.
-
- SELECT TEETH
- Once the individual has been selected to participate, the teeth to be sealed must be determined. Factors associated with the appropriate selection of teeth are :
-

- Tooth morphology may be used to determine tooth selection. While previous guidelines have suggested that a well-coalesced pit and fissure surface may not be at high risk for caries, in an individual with a history of caries, past or present, it may be better to apply sealants to protect against future decay. Successful sealant placement is directly related to the ability to maintain a dry field. Completely erupted teeth are most easily isolated. However, since treatment in the targeted population may be episodic, it may be best to seal any surface which can be adequately isolated. Assessment of caries activity level accomplished through the observation of present dental conditions in students will help in the selection of appropriate teeth to be sealed. For instance, molars with interproximal caries would not be a good candidate for sealants. Each tooth surface must be evaluated to determine the caries status. Pit and fissure surfaces can be classified as having no obvious decay, questionable decay, or obvious decay. In public health programs targeted to high risk individuals, it is recommended that ALL caries free surfaces be sealed. Questionable caries should also be sealed since there is a high probability those surfaces will have future caries. Look for the Journal of Public Health Dentistry article for more information FOLLOWING THIS STEP. Since the targeted population frequently does not access dental treatment, this approach is justified by the clinical research that has shown that caries inadvertently sealed will not progress if the sealant remains intact. If caries are obvious and enamel rods are broken, this surface should be referred for a restoration. An interim sealant could be placed to slow the caries process until the tooth is appropriately treated. If this decision is made, parents should be notified of the limitation of the sealant and urged to seek dental treatment for their child.
- A publication called BIBLIO focus on Dental Sealants FOLLOWS THIS STEP.

STEP 2

ESTABLISH COMMUNITY CAPACITY AND INFRASTRUCTURE

Successful dental sealant programs have several common elements:

1) **Small local beginnings**
2) **An involved advisory group**
3) **Planning viewed as a learning process**
4) **Links to a network of leaders and agencies with commitment to improving the health of children.**

BUILD SUPPORT FOR THE PROGRAM

Begin Local, Begin Small, and Go Slow

One of the first activities of the dental sealant program administrator is to identify individuals within the community who are willing to learn about the proposed program and help with initiating it

One of the first activities of the dental sealant program administrator is to identify individuals within the community who are willing to learn about the proposed program and help with initiating it. Form an advisory group, the purpose of which is to promote partnerships between the program and the community. As volunteers, advisory members bring expertise from professions, businesses, schools, and consumers. An involved advisory group insures support of the program. Seek members from various sectors of the community to increase the chances of maintaining a diversified, yet, interested membership. Invitations to participate on the advisory group may be extended to members of the following communities:

ˆ Oral Health Providers

The Oral Health Provider community includes dentists, dental hygienists, dental assistants, denturists, and dental laboratory technicians as well as personnel who operate oral health programs in the state or county. Not-for-profit dental services such as, neighborhood, community, migrant, and tribal dental clinics, and for-profit dental, dental hygiene, and other oral health-related services are part of this group. Networking with various providers strengthens the program in many ways.

ˆ Schools

The School community includes superintendents, principals, teachers, counselors, librarians, school nurses, and supportive personnel who work directly for a school or

school district, either public or private. Children and their parents, who are the recipients of the services, are part of this group. The school community must be an active participant in the decision-making process of dental sealant programs.

ˆ Health Professionals

Pediatricians, family physicians, nurses, nurse practitioners, naturopaths, dietitians, members of Board of Health, county commissioners, nutritionists, hospital personnel and insurance carriers can be vital links to the successful marketing and promotion of dental disease prevention programs. Seek to educate and involve representatives from interested and willing providers.

ˆ Businesses

Inappropriate decision-making and insufficient funding can eliminate a well-planned and valuable service to the community. Extend advisory membership invitations to business, corporate bodies, labor, and philanthropic organizations. Partnerships with the business and labor community provide opportunities for education, financial support, and advocacy for the program.

INVOLVE ADVISORY GROUP IN PLANNING AND LEARNING

Invited advisory group members need a voice in the program-planning phase. Clarify the roles and responsibilities of each member. Establish informal rules about when to call meetings, how to conduct meetings, how to record progress, and how decisions will be made. Ask members to help shape, change, and critique the plan. Keeps the planning focused on community needs and maintain flexibility as the program evolves and grows. Each group may have a different role to play. The following is a description of what each group may contribute. When you meet with them solicit more ideas.

ˆ Oral Health Providers

Meet with local oral health provider groups. In addition to sharing information about program goals, providers will want to know what is happening in their community. If they are interested in technical information about sealant materials, typical retention rates in community based programs, criteria for sealing over caries, quality assurance measures, portable equipment, infection control safety and efficacy of sealants, or follow-up protocols, you will have an opportunity to provide that information. Prepare a notebook of scientific articles about effectiveness and efficacy of dental sealants for caries prevention as the foundation for your decision to implement a program. This group can be instrumental in brainstorming ideas for recruitment of staff. They can assist in gathering professional support for the program.

ˆ Schools

The school community must weigh the value of a dental sealant program against the value of time spent in the classroom. If this is your initial relationship with school personnel, focus the first meeting on the benefits of dental sealants. Convince the

audience that the program is worth the time in the school day. Emphasize the long-term value and cost-benefits of a child with healthy teeth. Help them understand the costly effects over time of surgical or reparative therapies.

Approaches to consider:

Provide Information

Provide each school with an **information packet** which contains the program goals and objectives. Include samples such as consent forms, scheduling forms, classroom incentive ideas, and sealant educational material.

Gain Approval

Depending upon the district decision making structure, a superintendent may endorse the program for an entire system or may leave the final decision about participation to each individual principal. It is more efficient if the superintendent endorses the program for the entire system. Suggest that approach. If the superintendent is undecided, solicit assistance from your advisory group. School nurses are a useful first contact because they have direct knowledge of the decision-making hierarchy within the school. Because decisions for endorsing sealant programs may be lengthy, consider the approval process timeline in your planning. The approval process may take a considerable amount of direct contact with local leaders, oral healthcare providers, support groups, and school personnel. Patience with persistence is essential.

Build A Relationship

Once the program is approved, the sealant program administrator needs to determine the most appropriate way to involve the superintendent in gaining acceptance for the program in each school. Aside from the school principal there may be directors of student services or special services to support the program with the school staff.

Identify Partners

Enthusiastic teachers, nurses, or parents can help gain acceptance within the schools. Volunteers within the school may be interested in assisting with the coordination of obtaining parental consents for participation in the sealant program. Identify the enthusiastic supporters and foster their involvement.

ˆ Health Professionals

Health professionals who work with children and their families will be interested in learning about the sealant program. As knowledge expands about the underlying associations between oral health and general health, greater awareness of the importance of oral health will emerge. By working with the health community, the

sealant program can become another link toward dental disease prevention and oral health and general health promotion.

- **Businesses**

  Dental sealants are a proven dental caries prevention technology. It is important for the business community to understand that if this disease is prevented at its earliest sign, more costly care can be avoided. Endorsements of the dental sealant program by organization such as United Way, Kiwanis, Lions Clubs, YWCA, YMCA, Boy and Girl Scouts, local businesses, and from well respected members of the political business, regulatory and philanthropic organizations may provide opportunities for funding and sharing sponsorship of the dental sealant program. Work with media to inform the community of the benefits of early prevention and the value of a sealant program.

LINK DENTAL SEALANT PROGRAM TO NETWORK OF LEADERS

Once you have planned and implemented a small, local and successful dental sealant program in one community, plan to augment the program in neighboring school districts or communities. Draw on the talents of your original advisory committee for their expertise in identifying leaders in the proposed new sites. If the communities are very diverse, create another local advisory groups who can commitment to improving the health of children. Each group will learn the process of planning, implementing, and evaluating dental sealant programs. As community advocates for children s health emerge from your advisory groups, link with them and any organizations with which they may be associated. In this way, support and knowledge of the sealant program will grow quickly.

Gaining community support is an important component in the development of a community or school-based dental sealant program. Starting local, starting small, and building collaborative and functional partnerships with oral health providers, school personnel health, and business communities will ensure successful programs targeted to children who need preventive services.

As part of the establishment of an infrastructure, learn about billing procedures. To receive a Medicaid provider application, contact Provider Enrollment P.O.Box 45562, Olympia, Washington 98504-5562. A sample application FOLLOWS THIS STEP. In Washington State both dentist and dental hygienists are assigned provider numbers and are able to bill. In 1999, the reimbursement for the placement of a sealant is $22.22.

Medicaid also funds outreach by providing MATCH dollars to those agencies providing outreach to Medicaid clients. For more information on this contact your local health jurisdiction financial officer.

To learn about proper private insurance billing, contact the insurer directly.

A useful resource for working with communities can be found at the following Web site COMMUNITY TOOL BOX-- http://ctb.lsi.ukans.edu/ctb/.

STEP 3

DETERMINE STAFFING NEEDS AND TRAINING

The staffing of a dental sealant program depends upon the size of the targeted population , the availability of dental professionals and funding resources.

Staffing needs include:

Dentist: Under the Washington Administrative Code (WAC) a dentist must (assess) screen and evaluate participants to determine which teeth will benefit from sealants

Dental Hygienist: The WAC (246-817-550) allows dental hygienists to place sealants under the general supervision of a dentist.

Dental Assistant: The WAC (246-817-520) allows a dental assistant to apply sealants under the close supervision of a dentist. Dental assistants may assist dental hygienists in the application of sealants.

On-site Coordinator: An on-site coordinator can ensure the most efficient use of time with minimal disruption to the school.

Administration: Scheduling, handling equipment and supplies and billing can be handled by administrative support staff.

Contractor: A sealant program may be implemented through a contract with community providers. The same standards must be followed.

SEALANT APPLICATION

The most cost efficient configuration of staff is a dental hygienist/dental assistant team applying sealants using four-handed technique under the general supervision of a dentist. Newly developed teams can place sealants on 10-15 children in a school day. Experienced teams may be able to place sealants on 15 - 18 children per day. Staff must wear appropriate identification on-site. Follow school requests if staff members are asked to wear VISITOR badges. See step 8 for a standardized protocol for sealant application technique.

TRAINING FOR ALL STAFF

Infection Control/Medical Records

Training must be provided for sealant program staff on a regular basis to comply with WISHA/OSHA requirements regarding infection control (WAC 246-817-601 through 246-817-630) and Chapter 70.02 RCW (Revised Code of Washington) for Medical Records. Licensed personnel must provide a valid copy of their practice license and documentation of CPR certification. This documentation of staff licenses, WISHA training, confidentiality training and immunization records can be kept in a central location with written personnel policies. Details concerning infection control in a portable environment FOLLOW THIS STEP.

Use and Maintenance of Equipment

Familiarize all staff members with the use and maintenance of the portable dental equipment. Read all instruction and repair manuals. Develop maintenance schedules and follow them. Keep the telephone numbers of manufacturers easily accessible in case problems arise. Manufacturers can be very supportive with providing technical assistance to repair equipment over the telephone. If sealant staff or the manufacturer cannot correct the problem, a local dental equipment supplier may be able to help. Programs make a variety of arrangements for transporting equipment, ranging from staff using their own vehicles to having the sealant personnel use agency owned vans.

Record Keeping

Train all staff members in the use of forms for recording data. Each member of a sealant team must be able to record all necessary data accurately. The uniformity of data collected is imperative for valid data analysis. Perform a mock clinic to assure all staff are familiar with all data collection elements.

STAFF SPECIFIC TRAINING

Dentist: Train Dentists as a part of the sealant team. Dentists who understand and are familiar with the screening criteria will be able to screen children quickly. To calibrate examiners review all written criteria for tooth selection and assessment. The videotape entitled, Assessment of Children for Community Based Sealant Programs, Washington State Department of Health, can be used as a guide for training in assessment, screening and selection of children in public health programs. The order form for this video FOLLOWS THIS STEP.

Dental Hygienist: In most programs, a dental hygienist will be providing sealants. Assure that they can place quality sealants. Training in the application of the selected sealant materials must be done. For new sealant programs, dental hygiene schools or pediatric dentists may be good resources for staff training. Staff will benefit from reviewing and training in four-handed dentistry. This will increase the efficiency of the program. The observation an experienced dental

hygienist/assistant team applying sealants can be used as a training exercise. A list of sealant programs in Washington State FOLLOWS THIS STEP.

Dental Assistants: Train dental assistants for the role they will play in your program. If a dentist remains on site, assistants may place sealants. Assure they can place quality sealants. If dental assistants are assisting hygienists in the placement of sealants, their role may be to organize a system of maintaining and storing supplies, assuring and implementing infection control and processing paperwork (consent forms, charts, and letters to parents).

Contractors: When a local health jurisdiction has chosen to use a contractor to implement the program, a Request for Proposal (RFP) or a contract for services may be requested from interested providers such as dentists, hygienists, or dental clinics. The Quality Assurance Review in these guidelines can be used for contract development. Contracts must be on file in the LHJ and accessible to the State of Washington Department of Health. To assure the quality of the program is maintained, contractors must follow all policies, protocols and procedures. Unscheduled visits to school sites should be conducted periodically. The Quality Assurance Review should be conducted at least twice during the year, mid -program and yearend. New contractors should be reviewed more frequently including chart review of at least 10 randomly selected charts. Additionally, proof of the following information should be required of contractors and maintained by them:

- Written Policies, Procedures and Protocols
- Written Personnel policies
- Credential check of licensed staff
- Training plan
- Trade name and batch number of sealant material and application protocol
- Demonstration of capability to provide required state data
- Financial agreement
- Staff turnover rates
- Demonstration of reliable quality equipment
- Demonstration of capability of adhering to Quality Assurance Guidelines
- Written plan to accomplish the goals set by the local health jurisdiction
- References

STEP 4

SECURE EQUIPMENT AND SUPPLIES

Creating an effective portable dental environment requires special attention to supplies, materials and infection control. Equipment must be easily transportable and operate effectively when it is set up. Adequate supplies must be transported in a manner that maintains appropriate infection control. Portable dental equipment folds up and packs into carrying cases for light weight transport. A list of manufacturers FOLLOWS THIS STEP. The exact type of equipment will depend upon the size of the program, the number and types of providers, and the method used for sealant application.

PORTABLE EQUIPMENT COMPONENTS

The portable equipment needed includes a dental unit, air compressor, patient chair, light, operator stools, ultrasonic cleaner, autoclave and visible-light curing light units (if using light-cured sealant).

Dental Units The unit must contain highspeed evacuation and an air/water syringe with a self-contained water source. Low volume vacuums in most of the portable units is not sufficient to maintain a dry field. Optional equipment may include low volume vacuum, high and low speed handpiece attachments. Additional air-dryer attachments can be ordered with some equipment to minimize moisture that can develop in the air lines. Vacuum content bottles can be ordered in larger sizes to decrease the number of times they must be emptied during a working day. Large programs, or programs that wish to expand services, may want dental units with high and lowspeed attachments as well as high and low volume vacuum systems. Some types of portable dental units cannot operate handpieces and vacuum simultaneously.

Compressors Dry, oil-free air is essential for the application of sealants. Select an oil-less compressor considering weight, cost, horsepower, and the size of the air storage chamber. Compressors with small air storage chambers are lighter and smaller but less durable than larger ones. Oil-less compressors are noisy. Large compressors run less frequently so there is less noise. Extra long hoses (25 foot) are available to be purchased separately and allow compressors to be located away from the sealant placement area.

Patient Chairs Choose a patient chair that is durable, lightweight, folds easily, holds a person of average weight, is adjustable in height and back tilt and has a carrying case. Use caution when seating children since a source of accidents has been children taking a seat on the end of the patient chair. Use the patient chair with the end unfolded or place a student desk chair underneath the end of the chair to discourage children from sitting on it. Lower cost alternatives include lawn chairs or chairs made of cardboard.

Light A light with an intensity of 1800 candle power, or more, is preferred. Consider cost, weight ability to adjust and ease of bulb replacement.

Operator and Assistant Chairs Chairs that have an adjustable seat and back height will be most comfortable for sealant providers. Chairs with a wide base are less likely to tip. Operators, in school settings, have reported more accidents using the stools with wheels, probably due to the smaller wheelbase. If space permits, small stools or chairs can be purchased from office suppliers less expensively than chairs designed specifically for portable dental environments.

Fans Room temperatures and working environments in schools are variable. Fans are important for comfort and to extend the working time of autocure sealant. Box style fans can be used.

STERILIZER EQUIPMENT

Ultrasonic Cleaner Clean instruments prior to sterilization. The use of an ultrasonic cleaner decreases the likelihood of personal injury.

Autoclave OSHA and WISHA infection control requirements must be followed. Size and width are the most important consideration in selecting a sterilizer. If instruments are autoclaved at the sealant site, a lightweight sterilizer is critical. If instruments are sterilized at a different location, more instruments will be required. Steam, dry heat or chemical vapor sterilizers are available. Steam sterilizers that have six-minute cycles compensating for their small chamber size are available. Autoclave (steam/chemical vapor) **MUST** be tested **each week.** Resterilize instruments if not used within a month.

SUPPLIES

Isolation Aids **A tooth must be dry for sealant retention.** Dental assistants can aid in maintaining a dry field by retracting cheeks or tongue and using high volume vacuum. To improve evacuation, place the evacuator tip as close and horizontal to the surface of the tooth as possible. Maintain vacuuming while drying the tooth. During placement and curing or setting of the sealant, keep the high vacuum away from the tooth surface to avoid removing the sealant material before it has hardened.

- **Garmer clamps/cotton roll holders** The use of garmer clamps is essential when working without a dental assistant. Order an equal number of adult and junior sizes.

- **Other isolation aids** Dri-angles, dry tips, cotton rolls, disposable cotton roll holders, and/or disposable mouth props may be used to assure proper isolation.

Mirrors The amount of mirrors needed depends upon the size of the sealant program and sterilization methods. Disposable mirrors can be used for the screening examinations.

Explorers Explorers are not routinely required to evaluate teeth for sealant placement. They can be used to apply sealant to the pits and fissures. Also they are needed to evaluate sealant retention. In selected cases dentists may also request explorers for the screening examination**.** Order explorers dependent upon the size of the sealant program and sterilization requirements.

Sealant Placement Instruments Explorers, dycal instruments, perio probes can be used to place sealant and result in the thinnest of dental sealants. Carrier systems for dispensing and placing sealant directly to the teeth must be purchased in sufficient quantity to allow for sterilization between students. Choice of placement instrument can also depend upon operator preference and the brand of sealant material.

Sealant Etching Materials Quik pics, cotton balls or brushes are adequate for applying etch. Quik pics are popular and easy to use.

Sealant Material Visible light cured sealant or autocuring sealant material is recommended. Some evidence indicates that autocuring sealant results in slightly better long-term retention of sealant. Light cured sealant allows a clinician more variety in working time that may be helpful to maintain a dry field. Ultraviolet light cured sealant is not recommended!

Curing Lights Use visible light curing units with an audible tone to indicate curing time. A curing light guide with a diameter greater than 12mm will reduce curing time for large occlusal surfaces. These units can break and lose their effectiveness even when the light remains visible. A radiometer should be used ROUTINELY to measure effectiveness of light.

PURCHASING SUPPLIES AND EQUIPMENT

Most manufacturers and dental supply companies give government agencies and schools reduced institutional prices. Try to negotiate depending upon volume of the order. Some equipment, such as compressors, may be purchased retail. (such as Sears). Your local health organization will determine the protocol for purchases. Some agencies require vendors to submit formal bids. Be exact with the equipment specifications (size, weight, horsepower, foot-candles and portability) to avoid accepting equipment that is the lowest bid but does not meet program specifications. After equipment is delivered, unpack all dental materials carefully and be familiar with all instructions about operation, care and maintenance. Manufacturers representatives may be available to train staff in the set-up, use, and maintenance of the portable dental equipment.

Dental Sealant Program Recommended Supply List

Provider and Patient Protection

* Air-water syringe tips(disposable)
* Bib clips
* Bib
* Eyewear(for provider and patients)
* Gloves
* Gowns(laundry service)
* Hand soap
* Hand wipes
* Head rest chair cover
* Plastic sleeves for air/water syringe, vacuum and hoses
* Curing light handle covers
* Curing light
* Curing light tip covers
* Surface covers(plastic roll)

Patient Treatment

* Cotton roll holders/Isolators
* Cotton rolls
* DriAids,Dry Tips, Dry Angles
* Etching Liquid
* Evacuator tips
* Explorers
* Mirrors
* Pencils, Stickers(Incentives)
* Sandwich bags for toothbrushes
* Sealant material (Autocure/Light cure)
* Etch applicator(brush, quick tip cotton pellet)
* Disposable mouth props

Sterilization and Disinfection

* Autoclave/Sterilizer bags
* Autoclave/Sterilizer cleaner
* Autoclave/Sterilizer Spore test kits and service
* Autoclave/Sterilizer indicator tape
* Surface Disinfectant
* Distilled water
* Gauze squares
* Chemical disinfectant
* Refillable spray bottles
* Paper towels
* Trashliners
* Ultrasonic cleaner solution
* Vacu-Cleaner
* Tubs(Rubbermaid type) for contaminated instruments

Additional Supplies

* Heavy duty extension cords
* Power strips
* Tool kit for equipment repairs(alan wrench, duct tape)
* Cooler for sealant material storage
* Office supplies(stapler, paper clips, tape, pens, extra forms, etc,)
* Electrical plug strip
* Plug converter
* Table covers
* Clock with second hand
* Radio/music
* Tubs(Rubbermaid type) for transporting supplies

Costs/Budget

Item	Number Needed	Cost/Unit	Total Cost
Equipment choices			
Staff choices			
Supply choices			
Total			

1999 Retail Portable Dental Equipment Costs

Unit	2295.00
Patient Chair	1295.00
Light	695.00
Compressor	1095.00
Operator Stool	495.00
Assistant Stool	495.00
Steam Sterilizer	2000.00
Ultrasonic Cleaner	300.00
Total Equipment Cost	8670.00

STEP 5

DEVELOP POLICIES, PROCEDURES AND DATA COLLECTION FORMS

A community — based sealant program must have a written set of **policies, procedures and protocols** established as well as a sound method of collecting data. All of these should reflect the local jurisdiction and legal parameters for such things as consent forms, billing procedures and the use of volunteers. Each community, particularly each school district, is quite autonomous regarding procedures in schools. Review the policies, procedures, and protocols annually. Keep these updated and have them available for staff review. Decide what data to collect as you plan the program since program evaluation is part of the initial planning process. Assure that staff/contractors are trained in the use of data forms so there is consistent information collected. Consult with individuals trained in statistical analysis and Medicaid billing before program implementation to assure that the appropriate data is recorded in the most useful way. Local health jurisdictions with MCH contracts with the Washington State Department of Health have reporting requirements that must be followed. See reporting requirement following this step. If the program is grant funded, make certain any grant requirements can be reported.

Student s sealant records ar legal records and must follo RCW Chapter 70.02 for Medical Records

Develop forms reflecting the specific needs of the community and program. Examples of forms currently in use by sealant programs in the State of Washington may be found following this step. Student s sealant records are legal records and must follow RCW Chapter 70.02 for Medical Records rules. An agency legal review of pertinent forms should be done to assure that the program is operating within the legal parameters.

PROGRAM FORMS

Student records Students patient records are immediately available for use when the student is receiving care. When not in use, records are kept in a secure area. Perform a record review for accuracy and completeness at the end of each school year or at another appropriate time. Include a place on the record to collect demographic information that will allow for patient identification and for gender and race breakdown. Attach other pertinent forms, such as consent, to the patient record. Remember any service beyond oral health assessments needs informed consent. Make certain that consent forms are

complete, have parent/guardian signatures. For improved consent form return rates have letters available in languages appropriate for the population targeted. Collect a medical history on all patients, with date and signature of consenting parent or guardian. Follow-up on compromising medical conditions with parent or other health care provider and document. Flag as appropriate records of patients with compromising conditions. Train each provider to review medical histories and sign after review. After the sealants are placed, records are completed, signed/dated by both the examiner and provider of sealants. Document diagnosis clearly in the initial examination section of the patient record. A treatment plan based on the diagnosis is clearly written on the patient record. Other comments such as behavior of the child are complete and written clearly.

Billing information

Collect all pertinent information so that accurate billing can be done. The billing information that is needed may vary among programs. Consider the billing requirements for private insurance and Medicaid when developing the form.

Collection of Assessment Data

Collect data carefully so it can be accurately reported according to the Washington State Department Of Health "Sealant Data Summary" form. Conduct oral health assessments using the Washington State Smile Survey format. Record and date all findings. Data collection methods vary depending on program size, resources available and years in operation . Data may be hand tabulated or entered directly into computers at the school site. EPI-INFO (CDC free computer Program) and ACCESS are used successfully in many programs.

There are two kinds of data collection **qualitative and quantitative**.

When collecting **quantitative** data, focus on the following areas: consent rates, participation rates, oral health status, and dental treatment referral rates and follow-up status of referred children. Collect the following to assist in program evaluation:

* number of schools participating in sealant program,
* school selection criteria (rate of F/R lunch participants),
* numbers of children screened,
* numbers of children sealed,
* numbers of teeth sealed, sealant retention rates

When using **qualitative** methods to collect data, interviews, surveys, focus groups, and group discussions can assist in gaining useful information from schools, communities, parents, students, staff or other participants in the sealant program. Phone calls to key informants can also be helpful in finding out how the sealant program was received in your community. A sample survey FOLLOWS THIS STEP.

Since sealant programs are complex and involve many details, problems can be avoided by using checklists to keep program details on track. These lists may include school contacts, program activities, forms review, supply/equipment inventory, and are a quick, easy way to

monitor the progression of a sealant program. Examples that may be useful to review **FOLLOWS THIS STEP**.

Since all programs in Washington State must collect this basic information, program managers will be able to compare their patient profiles, the number of sealants placed and retention rates with other sealant programs.

STEP 6

SCHEDULE SCHOOLS/SITES

When scheduling a sealant program for the first time, it is wise to go to the school and meet with as many school personnel as possible — principal, school nurse, secretary, appointed liaison, teachers, parent volunteers. Describe the program and their importance in it. Look at the physical space where the program will operate. Make sure that the space is adequate for program needs and has the appropriate amount of room for equipment, access to water with enough electrical plugs. Picture your portable equipment set up in this area. Consider what adjustments the program or the school may need to make. Finalize space plan with the school. Agreed upon the following before conducting program in any school. Philosophy and importance of a preventive sealant program to the school. Provide the school staff and the school administrator with educational materials on sealants. Show videotape of an operating sealant program Seal America, the Prevention Invention . Information on video purchase FOLLOWS THIS STEP.

Availability of space for efficient operation of program

The space should be approximately l0 ft. by 14 foot per operatory, have adequate electrical outlets and voltage, be well ventilated, have good lighting, and be as close to ground level as possible. Stages of auditoriums, corners of gymnasiums, large hallways, locker rooms, and vacant classrooms are the usual locations for the program.

Support of school personnel

Sealant programs are difficult to implement successfully unless school personnel are cooperative. Teachers play the most important rolesince they can motivate students to return consent forms. These forms are key to sealing as many children as possible**.** Teacher s enthusiasm is critical. The sealant program person scheduling the school must appreciate her role in gaining cooperation from the school principals and staff. The sealant program will be competing with other "worthwhile" programs for time and space. The location and length of these initial contacts will depend upon the interest of the principals, their experience with sealant programs and your relationship with them. Contacts in subsequent years can be quicker and usually accomplished by telephone.

Teacher s enthusiasm is critical

To estimate the number of days required to complete a school, know that most sealant programs have been averaging a 60 per cent **positive** consent rate. A goal, therefore, could be that 60 per cent of the enrollment in eligible grades will participate in the program. School

personnel can provide the number of students enrolled in eligible grades. After the first year of the program, consider previous year's participation to help you estimate the time that will be needed in each school. Efficiently operated programs provide sealants for 10 to 15 children per team each school day. Experienced programs can see up to 18 students.

DOCUMENT YOUR INTERACTIONS

Document the information discussed during the initial contact with the principal or other school staff members so the any program staff can access the information discussed and the decisions made concerning the operation of the program.

Initial Contact Person Record the name of the person and date contacted to prevent confusion. Determine responsibility for program implementation with members of the school staff. When a school nurses is available, communicate the details of the program with her. She can encourage the students to return their consent forms, inform parents of the benefits of sealants, and convince the classroom teacher of the worthiness of the program. A follow-up letter to the principal or his/her designee summarizing key points (dates and times, room locations, etc.), can aid in avoiding potential confusion.

School Hours School operating hours vary. Record school specific information such as recess, lunch times, and any other special activities that may influence the ability of the school program to operate efficiently.

Dates to Apply Sealants Agree and document the dates for sealant application. Assure that all pertinent school personnel agree to the dates scheduled.

Dates to Give Presentations to Students and Distribute Consent Forms Agree and document times and dates for classroom presentations. (See Tips for Success)

Date Consent Forms Will Be Collected Agree and document date that consent forms will be collected. Confirm with classroom teachers the date consents will be collected so they can support and encourage children to meet this timeline. Collect forms enough in advance to prepare student records, review health histories and follow-up.

Enrollment by Grade and Classroom Obtain class lists of all classes involved in the program. Use enrollment lists to check the return of consent forms for accuracy and completeness.

Room or Space where Program Will Operate Note the room or area within the school where the sealant program will operate. Communicate this information to program staff so they know where to report and set up equipment.

REMINDER FOR SCHOOL STAFF MEMBERS

Classroom teachers are the in obtaining the maximum number of returned conse forms

Send a confirmation of when the equipment will arrive, the area in which the equipment will be placed, the time the staff will set up the equipment. Ask for copies of class lists of those grades involved in the program. Verify that there are no assemblies, field trips, achievement tests, plays, etc., scheduled for the days the sealant program will operate. Check on "out of classroom schedule" to determine where the students will be (music, P.E., art, etc.). Confirm with school personnel the permission to retrieve students from these classrooms. Classroom teachers are the key in obtaining the maximum number of returned consent forms.

Parental Consent Obtaining parental consent is a critical component in the operation of an effective sealant program. The use of rewards such as pencils, erasers, stickers can enhance the rate of return. One program celebrates the success of every classroom that returns 100% of consents by providing supplies for a popcorn party for the classroom.

Evaluation studies conducted in local and national programs have shown the following:

Incentives (such as sticker, pencils, balloons, etc.) to students had the greatest effect on increasing participation

Sixth graders were, by far, the poorest participators

Informational brochures attached to consent forms had a slight effect on increasing participation

An informational fact sheet for teachers did not increase participation

Schools completed in the first half of the school year tended to have higher participation rates

Teachers' attitudes about the program greatly affected participation

Phone calls to parents of non-participators with a follow-up mailing of a second form greatly improved participation.

STEP 7

PREPARE SITES FOR IMPLEMENTATION

The efficiency of the program is highly dependent upon the preparation involved before the equipment and staff arrive at the school. Attention to the preparation details, outlined in step 6, will make the implementation process much smoother.

The efficiency of the program is highly dependent upon the preparation involved before the equipment and staff arrive at the school. Attention to the preparation details, outlined in step 6, will make the implementation process much smoother. With careful planning, the school personnel will be well aware that the program is scheduled, will understand how it will operate in the school, and should understand their role in the program. Consent forms should have all been collected and charts prepared prior to this time. Training for personnel will have been completed.

LOGISTICS

Arrive at the school early to allow enough time to set up equipment and prepare to call children for sealant placement. All equipment set-up and breakdown, sterilization, instrument tray preparation, record keeping and paperwork should occur before or after school hours so that the six-hour school day can be used exclusively for patient treatment.

Emergency and Hazard Preparedness

Staff members should be familiar with both school and portable work-site emergency procedures before beginning work at any site. Accident and injury report forms should be available on site. An appropriate list of emergency telephone numbers should be kept with these forms. The on-site emergency supplies should be kept in a central location known to all staff.

Each portable work site should have access to a fire extinguisher. Check the building and determine the location of the fire extinguisher. These extinguishers must be inspected on a yearly basis. Since you may have several operatories located at one site, the fire extinguisher needs to be located in an area both obvious and accessible to all. Each staff member should be aware of the school site fire escape plan. These exit plans can be found in a prominent place--usually in the hallway.

Portable fire extinguishers should be available in all equipment and personnel transportation vehicles. If a fire extinguisher is not available at the work site, one may be brought in from one of the vehicles.

Hazardous chemicals must be appropriately labeled and stored, according to manufacturer s directions and OSHA/WISHA guidelines. All staff should receive training in the use and storage of hazardous chemicals, along with instruction in emergency procedures in case of injury or inappropriate exposure to these chemicals. Keep an emergency procedure guide on-site, along with the Material Safety Data Sheets (MSDS).

Organize Equipment and Supplies

Pack the equipment and supplies so they can be unpacked and transformed into dental operatories quickly. Label containers with the contents. Create a dental treatment area and a sterilization area. Each assistant can have her own equipment and supplies. Share a common sterilization area. Electrical outlets should be located to determine the best location for equipment. Request a table from school personnel for the sterilization area and supplies.

Reserve an area for extra supplies, a back-up air compressor, and empty equipment bags and containers. Keep these located away from the treatment area but accessible if extra supplies/equipment are needed. Carry a sufficient amount of supplies for one week of operation. Select a team member to be responsible for stocking and maintaining supplies. Pre-loaded trays should contain all the supplies necessary to complete work on a child. This tray can be wrapped in a headrest cover to maintain sterility.

Strategically locate the supplies around the patient chair and unit so everything is within easy reach of the operator and assistant. Storage containers that are used to transport supplies can double as tables. TV trays, extra student desks or student chairs can be set up on either side of the dental unit to hold patient charts and parent notes, and additional disposable supplies and sealant materials. The containers behind the dental assistant hold prepared patient trays, hand wipes, toothbrushes, foil wraps for the dental fights, disposable sunglasses for eye protection, plastic sandwich bags for the toothbrushes and extra supplies that may be needed as the day progresses. A storage container by the operator holds gloves masks and hand wipes. A dishpan is placed under the TV tray so dirty instruments can be deposited as patients are completed.

Keep the sterilization area close to the treatment area. Have disinfectant and containers with rinse water, autoclave bags, towels, and gloves available. Reduce the compressor equipment noise during operation as much as possible. Use the padded carrying case to muffle the noise of the compressor once it is connected electrically or use a long extension cord and move the compressor outside of a door or window.

While the staff is preparing the equipment, see if any additional consent forms were returned to the school. If there are forms, review the health histories and prepare a student record.

Screen and Evaluate for Sealants

Patient evaluations or screenings are completed in a variety of ways. In some programs, the screenings are completed days or weeks in advance of the program so program

administrators know how many children need sealants. Other programs do the evaluations and sealants during one school visit. The second approach offers the most cost efficient way to operate. The following is an example of how one efficiently operated program completes the dental evaluations.

Ten minutes after school starts, the first child is seated in the chair for evaluation. To accomplish this, a program staff or volunteer goes to the first classroom shortly after school begins, explains to the students and teachers how the program will operate .All the children in the class who returned a consent form are called by name. The students, 5 - 7 students at a time, are escorted to the evaluation area where she distributes each child's record to them.

The children line up and the dentist screens the children at the rate of 45 to 50 children per hour. The dentist addresses each child by name to make sure they are recording screening/evaluation results on the correct chart. The hygienist places a headrest cover on the chair (paper towel squares are an excellent, cost effective substitute and they are quicker and easier to change). A child then gets into the chair and receives a dental screen. During the screening, the dentist calls aloud the evaluation results, including which teeth need sealants and which teeth are decayed, missing or filled. Each permanent molar must have a diagnosis. The findings are recorded on the patient's chart. The patient name and all demographic information are pre-recorded on the chart. The information recorded during the screening is as follows:

1) diagnosis of whether a sealant is needed on each posterior tooth
2) the evaluation date
3) Washington State Smile Survey information.

After the screening, the child returns to class or moved to another chair/operatory to have sealants placed.

The dentist/screener deposits soiled instruments into containers on the floor, and throws disposable gloves in a nearby trash receptacle. If two containers are used to deposit the soiled instruments, the explorers (if used) and mirrors can be separated. This saves time in sorting, during the sterilization process, and minimizes the chance of injury from exposure to sharp explorers.

The staff or volunteer who accompanied the children from their classroom gives each one a reward (i.e., sticker) for participating in the program and maintains "crowd control . Meanwhile, if a second dental hygienist/assistant team is available, they begin to apply sealants to those children screened.

As soon as screening/evaluations are completed, the dentist signs each record and the hygienist organizes the records by classroom and sorts out the records of those children who do not need sealants.

Scheduling students for sealant placement

Teamwork is important. Organization and systematic patient flow and the teamwork that develops between the dental hygienist and assistant contribute greatly to program efficiency. Maintain patient flow to assure efficient operation. Each team can have one child in the chair and one child waiting.

While waiting, the child is given a toothbrush to brush his/her teeth. This gives the waiting child an opportunity to watch the procedure and minimize any anxiety. Organize the charts so that as soon as the child's sealants are completed he/she can return to the classroom and send another child to the sealant area.

As a child is dismissed from the chair, the instruments are deposited in a dishpan located on the floor and the disposable items are thrown into a trash receptacle. The unit is disinfected, a new instrument tray is prepared and the next child sits down in the chair. Meanwhile, the sealant record and the parent letter/referral are completed. The child is sent back to class with his/her letter and another child is requested to come to the sealant area.

Check students names carefully to assure that the student record matches the child being treated.

Refer students for Further Treatment

A referral system should be in place to assist families in obtaining needed dental treatment for their children. Determine the referral sources available in the community. Prepare a list of resources by neighborhood. Community health clinics, pediatric dentistry training programs, hospital dental programs, dental schools, local United Way agencies, and private practitioners are all options for referrals.

Send a letter home with each child who participates in the program. The letter informs the parents of how many sealants were placed and if any obvious dental decay was detected. It can be a health promotion tool by explaining the importance of regular dental check-ups and can provide a telephone number to call if the parent has any questions.

MAIL a letter home to those students who have an immediate treatment need. To ensure that follow-up treatment is sought, a telephone call to the parents may be useful. Seek the assistance of the school nurse. Several sealant programs report untreated disease rates in the range of 28 to 34 percent. When a child has urgent dental needs (i.e., abscess or swelling) notify school personnel whenever possible and arrange telephone calls to parents or guardians. The goal is to assist families in finding appropriate dental care for their child.

Several sealant programs report untreated disease rates in the range of 28 to 34 percent

Provide the school nurse with a list of children with obvious dental treatment. Often, he/she has contact with parents regarding other health concerns and can include the need for dental care in her discussion with them. Be sure the school nurse and school secretary has a list of local referral sources.

Develop a system to track the success of the referral component. This may be done when sealant retention checks on third grade children are scheduled as part of the quality assurance program. Children who received sealants and were referred for treatment can be assessed to see if they received the necessary treatment within the year. The impact the program has on accessing children to dental care can be evaluated. The success of various strategies for follow-up can be determined.

TIPS FOR SUCCESS

The following suggestions can help your program to be more successful.

Presentations Formal presentations by a dental hygienist or dental assistant scheduled with the students describing sealants and encouraging participation and giving anticipatory guidance help in the success of sealant programs. Consent forms are distributed during the presentation. These presentations occur well in advance (2 - 4 weeks) of the program implementation to allow adequate time to collect consent forms and prepare patient charts. Educational videos that describe sealants can be used during the presentations. An excellent video to consider for this purpose is entitled "Seal in a Smile" and is available from the Columbus Health Department, Community Dental Programs, 1815 Washington Boulevard, Columbus, Ohio, 43215. Order form **FOLLOWS THIS STEP**.

The presentations can be scheduled during the initial contact with the school. Details such as the location within the school and manner in which the presentation will be done and consent forms distributed, should be documented in school folder. This will assist the program staff person know what has been agreed upon. If no time is scheduled for presentations, have a video available for the classroom teachers to show at their convenience. An incentive to return the consent form can be introduced whether a program staff person or the classroom teacher is providing information to students about the program. Some anticipatory guidance is important to alleviate any anxiety students may have in having sealants applied. For some children, this will be their first dental experience.

If program staff does the presentation, encourage classroom teachers to be present for the session. Teachers who understand dental sealants become supporters of the program. The presentation can be done by grade or by classroom. Smaller groups are more effective than larger groups.

Information to Parents Informational brochure or fact sheet attached to the consent form can help in educating parents about sealants. In focus groups, some parents indicated they would like more information about sealants before they made the decision to have their child's teeth sealed. Including the information on the consent form may make it too cumbersome for those parents who do not need additional information or for those who have problems reading lengthy forms. Informational brochures answering commonly asked questions about sealants in conjunction with the consent forms had a modest effect on increasing participation. The cost factor of the brochures must be considered when planning your program.

Telephoning Parents To enhance participation of the children who fail to return a consent forms, telephoning parents and mailing a second consent form with a stamped self-addressed envelope works well. Volunteers may be used

to make the calls since they can take a considerable amount of time. They are more successful when done in the evenings. Securing the telephone numbers must be arranged with the schools. Some schools policies will not allow this practice. The cost of this effort must also be considered.

Consent Forms in Foreign Languages

Following this section are samples of forms that are used by some programs. The need for translations will vary depending upon your community. In areas with large numbers of families who speak English as a second language, a consent form in their primary language may enhance participation.

Forms on colored paper

If you use other than white paper, these forms are more identifiable in stacks of classroom papers. Some sealant programs resend consent forms home with each child who has not returned a form when all others are collected. These can be placed in the teacher's mailboxes for redistribution.

Review Forms before going to school

The following tasks should be completed before the program operates in the school:

Review consents for parent signatures. Those without signatures could be sent back home with the students or mailed so signatures can be obtained.

Review all health histories. Follow -up with parents or physicians when indicated. Program planners must make the decision regarding whether or not to use a health history. Some program planners feel a health history is not necessary because of the non-invasive nature of the sealant placement procedure. Others feel that certain medical conditions may indicate the need for special considerations such as prophylactic antibiotics. Still others feel that a history is advisable, for legal reasons. Follow the standards in your professional community.

Prepare a sealant record for each child, attach the consent form. Arrange the charts by room number so the children can be easily located once you are on site.

STEP 8

PROVIDE THE PREVENTIVE SERVICE

Sealant retention is directly related to the application technique. Each step must be carefully executed. The application technique will vary depending upon the staffing of the programs and the type of sealant material used.

Clean Tooth--*Brush It Off*

The purpose of cleaning the tooth prior to sealant placement is to thoroughly remove all the plaque or debris from the tooth surfaces. Different cleaning methods have been advocated such as brushing with water, air polishing, hydrogen peroxide, and many others. Research shows that retention rates are similar regardless of cleaning methods. Therefore, any method that removes the plaque or debris is acceptable. The easiest cleaning method is to brush the tooth surfaces with plain water. After the surfaces are cleaned and thoroughly rinsed, dry the teeth and check for any remaining debris.

Isolate and Dry--*Keep it Dry*

Isolation is the most critical aspect of sealant application. Salivary contamination of a tooth during or after acid etching will have a detrimental effect on retention. Studies show that even a one-second saliva contamination decreases retention. The use of Garmer clamps (cotton roll holders) is one of the most successful methods for isolation. The clamps hold the cotton rolls in place and keep the tongue out of the way. Cotton rolls, dry angles, or gauze should be placed over the parotid duct. Some operators like to place a dry angle between the cotton roll holder and the lingual surface of the mandibular teeth to create an additional barrier for the tongue. The saliva ejector and/or high volume evacuator should also be used.

After the teeth are isolated, they must be thoroughly dried before etching.

Acid Etching--*Make it Frosty*

The purpose of acid etching the surface is to increase the surface area by forming micropores in the subsurface of the enamel. These micropores increase the mechanical retention of the sealant. Using cotton pellets, brushes or any manufacture applicator, place the etchant 2-mm past the margin to be sealed. The etched surface that is not covered by the sealant will remineralize within twenty-four hours.

Follow the manufactures recommendation for etch time. Studies show that sealant bond strength to enamel are comparable for etch times from 15 to 60 seconds. Additionally, primary teeth that are etched for the same time as permanent teeth show similar retention rates. The operator can determine if the etch time was appropriate by observing if the surface has a frosty appearance when dried.

Rinse and Dry--*Don t Rush It*

Rinse the etched surface for a sufficient amount of time (10-15 seconds) to remove all organic particles from the micropores. From this point forward, until the sealant has hardened, salivary contamination will have a detrimental affect on sealant retention. If there is any salivary contamination of the etched surface before the sealant has hardened, re-etch for 10-15 seconds.

To ensure the surface remains dry after rinsing, replace the water soaked isolation items and Garmer clamp. To prevent delay and possible saliva contamination have the cotton rolls placed in a second Garmer clamp at the beginning of the appointment. Occasionally, water can be removed from the cotton rolls with a high-speed evacuator and dry isolation items can be placed over the wet items.

Before drying the surface, it is important to check the air syringe for moisture in the line by blowing air on the bib or mirror. Dry thoroughly for 15 seconds and evaluate the surface for a frosty, white appearance. If the surface does not have the appropriate appearance, re-etch for 10-15 seconds.

Place Sealant --*In The Groove, Let It Flow*

Since the application step will vary according to the product selected, the operator should follow the manufacturer s instructions. Applicators will also vary according to the manufacture and operator s preference. If more than one tooth in a quadrant is being sealed, the most posterior tooth should be treated first since maintaining dryness is more difficult in the back of the mouth. To avoid bubbles, don t shake the containers immediately prior to placement.

The patient s head should be positioned so the occlusal plane is parallel to the floor. Depending on the consistency, apply the sealant to the most mesial surface and allow the sealant to flow distally. If the sealant material is very viscous, the operator may need to pull the sealant material through the pit with an explorer or dycal instrument to achieve desired thinness. For maximum caries protection, all susceptible pits and fissures should be sealed with a thin layer of sealant. Be sure not to overfill fossa.

When self-cure sealant is used, one drop of liquid catalyst and base are mixed together in a dappen dish. One drop of each is usually enough to seal four teeth or one quadrant. Working

and setting time will vary according to temperature and product. Normal working time is 30-45 seconds and setting time is 60-90 seconds. Check to see if the sealant is harden in the dappen dish before examining the tooth.

Light-cure sealants do not require mixing. After the sealant is applied to the surface, it is important to allow enough time (5-10 seconds) for the material to flow into the grooves before curing. Hold the light as close as possible without touching the surface and cure for a minimum of 20 seconds. Under curing can affect the retention rate while no harm can be done with over curing. To cover the entire surface, a larger 12-mm curing light tip is recommended.

Evaluate Sealant--*Don t Miss The Pits*

Isolation of the teeth should be maintained until the sealant is checked by sight and touch for complete coverage of all pits and fissures. Avoiding undoforce, check retention by attempting to dislodge the sealant with an explorer. Additional sealant material may be applied directly to the surface if no salivary contaminated has occurred. Otherwise, re-etch for 10 seconds before reapplying the sealant.

Check the contacts with floss and evaluate the gingival area for excess sealant. Excess can be removed with a scaler or flame shaped polishing bur.

The patient should be advised that it is normal to have slight temporary occlusal interference. Depending on the filler content, the sealant should abrade into proper occlusion within three or four days. If necessary, the occlusion can be adjusted with a polishing bur.

To prevent a bad taste, after the sealant has hardened, the air inhibited greasy layers on top of the sealant should be removed with gauze. Sealants should be re-evaluated at recalls. The need for re-application will be the highest within the first six months.

TROUBLESHOOTING

Common problems and possible causes found during sealant placement.

Sealant Application

Common Problems	Possible Causes
Sealant will not polyermize (harden).	• Salivary contamination • Etch brush was inadvertently used to place the sealant
Sealant sets up slowly.	• Sealant material is past the expiration date • Sealant was not at room temperature
Sealant comes off when checking with an explorer.	• Salivary contamination • Improper curing time • Improper cleaning of the tooth • Improper etching time • Incomplete rinsing after etching
Bubbles are present in sealant surface.	• Brushing or dabbing sealant on tooth rather than allowing sealant to flow into grooves • Excessive mixing or stirring of sealant before placement
Excessive occlusal interference is present.	• Sealant is placed too thick • Incomplete trimming after sealant is placed

STEP 9

EVALUATE THE PROCESS AND OUTCOMES

The effectiveness of sealants is well documented in the literature

The effectiveness of sealants is well documented in the literature. Sealant program administrators should concentrate evaluation efforts on the quality of the sealants placed, acceptability of the program and cost effectiveness of the program. Applying quality sealants in a cost efficient manner is important in supporting the operation of a school-based program. Program evaluation is necessary whether program staff or subcontractors provide direct care.

SEALANT RETENTION

The quality of the sealants being applied can be measured in two ways. First, a sample of children who receive sealants can be re-evaluated within a few days of sealant application to ensure that the sealants are still intact and adequately cover surfaces. This form of evaluation is particularly effective for new providers so feedback concerning the quality of the sealants is immediate and any problem detected can be quickly corrected. The number of children checked and the regularity of the checks will vary among programs depending upon the results of previous long-term and short-term retention checks, staff turnover, and program protocols. Secondly, retention of sealants must occur in the next school year.

One Year Retention Rates

Long-term retention checks must occur in the second year of the program and beyond, and should be measured on as many children as possible. Lost sealants and partially lost sealants reflect errors in tooth selection, equipment failure or operator technique. According to the literature, one year retention rates of properly applied sealants should exceed 85 percent. Children in each school who had sealants placed the previous year should be reexamined. The retention checks involve third graders who were sealed the previous year.

Advance preparation is necessary for retention checks. Using the third grade class lists, determine which of the children sealed in second grade are still enrolled in the school. Mark their current room number on the student record before returning to the school for the checks. Sealant programs should differentiate between totally lost sealants and partially lost sealants by indicating retention rates at the surface level Any surface sealant lost counts as a total tooth sealant lost. Have evaluation criteria which clearly defines lost sealants and partially lost sealants so they are recorded properly.

Consider the time it will take to apply lost sealants in your planning. Each program has the responsibility to set the policy regarding parental consent for reexamining and or resealing students. Some programs allow for reapplication of lost sealants using the original parental consent. Other programs may require new consent forms for lost sealant application. Programs **MUST** reseal teeth if sealants have been lost. Decide if sealants will be placed for children who were absent for screenings, placement in second grade or whose teeth were not erupted. Keep new and replaced sealants separate in your data so you have accurate retention rates..

PROGRAM EFFECTIVENESS

Keep accurate records. Collect necessary data carefully for reporting. Look at your original program plan and evaluate whether you have reached your objectives. Evaluate your program in the following areas.

- population served is at high risk for dental occlusal caries
- community participation and support of program is present for continuation
- staff is adequately trained and following guidelines
- appropriate equipment and necessary supplies are available
- policy, and procedure protocols are updated
- adequate data collection is performed
- referral rates are monitored and community referral resources are developed
- records are properly documented
- retention rates are within acceptable limits
- participation rates are high
- program is cost effective

By continually evaluating the program, changes can be made which will strengthen future years activities.

References

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